

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended) A method of measuring the internal structure (~~packing structure or dispersion condition of particulate material~~) of a composite material filled with ceramic particles having an irregular matrix by observations based on its optical anisotropy, which comprises

mixing particulate material as raw material with a liquid material to obtain a composite material filled with ceramic particles,

making visible the internal structure (~~packing structure or dispersion condition of particulate material~~) of the composite material by utilizing

the photoelasticity based on local rearrangement of liquid material molecules
or

the difference of refractive indices of the particulate material and liquid material, and

then observing the internal structure, wherein

the internal structure of the composite material is the packing structure or dispersion condition of the particulate material in the composite material.

Claim 2 (Currently Amended): The method ~~of measuring the internal structure of a composite material filled with ceramic particles~~ according to a claim 1, wherein the particulate material is an SiO₂ based material or AlN based material.

Claim 3 (Currently Amended): The method ~~of measuring the internal structure of a composite material filled with ceramic particles~~ according to claim 1, wherein the liquid material is a resin based material.

Claim 4 (Currently Amended) Equipment for evaluation used in the method of measurement claimed in any one of claims 1 to 3, which comprises as structural elements

- two polarizing elements,
- a monochromatic light source or electron beam source,
- means for observing a transmitted image,
- a thin strip sample for transmission observation arranged between the two polarizing elements and comprising a composite material containing ceramic particles in a liquid matrix,

and

means for arranging a the sample, wherein

~~a thin strip sample for transmission observation is arranged between the two polarizing elements,~~ monochromatic light polarized by the first polarizing element is directed onto the sample, and subjected to double refraction at optically anisotropic regions ~~such as coagulations in the sample,~~ then re-polarized by the second polarizing element, and observed by the means for observing a transmitted image ~~observation means~~ to evaluate optical behavior thereof ~~such as diagonally opposite positions or interference.~~

Claim 5 (Canceled)

Claim 6 (Currently Amended) The ~~evaluation~~ equipment according to claim 4, wherein halogen light is directed on the sample.